

IN THE CLAIMS

Please amend the claims as follows.

For the Examiner's convenience, a list of all claims is included below.

Claims:

1. (Currently Amended) A computer-implemented method for error detection in digital storage data in a computer system, comprising:

retrieving one block from a plurality of blocks, wherein the retrieved block has a pattern and a checksum field, and wherein the pattern is written into the plurality of blocks during a format operation on the storage device, wherein no checksum value is written to the checksum field during the format operation;

determining whether a checksum computed from the retrieved block is different than the value in the checksum field of the retrieved block;

determining whether the retrieved block includes the pattern; and

generating an error if the retrieved block does not include the pattern and if the computed checksum is different than the value in the checksum field.

2. (Canceled)

3. (Currently Amended) The computer-implemented method of claim 1, wherein the block is retrieved in response to a read request from an application.

4. (Currently Amended) The computer-implemented method of claim 1, further comprising:

writing data and a calculated checksum to one block after the pattern was written to the blocks during initialization.

5. (Currently Amended) The computer-implemented method of claim 4, wherein the checksum is calculated by:

computing the checksum from data received in a write request from an application.

6. (Currently Amended) The computer-implemented method of claim 1, wherein the checksum is computed with an Exclusive-Or operation.

7. (Currently Amended) The computer-implemented method of claim 1, wherein the pattern and checksum field are at identical locations in each of the plurality of blocks.

8. (Currently Amended) The computer-implemented method of claim 1, wherein the block of data retrieved from the storage device is processed by a target driver, a device driver specific to the storage device, and an adapter card specific to the storage device.

9. (Currently Amended) The computer-implemented method of claim 8, wherein the block of data is retrieved by:

receiving at the target driver a first request for data from an application;

generating a second request corresponding to the first request by the target driver;

sending the second request from the target driver to the device driver;

generating a third request corresponding to the second request at the device driver,

wherein the third request is formatted to be compatible with the hardware of the storage device;

and

transmitting the third request from the device driver to the storage device via the adapter card.

10. (Currently Amended) The computer-implemented method of claim 9, wherein the first request is for data having a first byte length and wherein the second request is for data having a second byte length longer than the first byte length.

11–17 (Canceled)

18. (Currently Amended) A computer system for error detection in digital storage data, wherein the digital storage data is contained in a storage device, and wherein the digital storage data comprises a plurality of blocks, the computer system comprising:

means for retrieving one block from the storage device, wherein the retrieved block has a pattern and a checksum field, and wherein the pattern is written into the plurality of blocks during a format operation on the storage device, wherein no checksum value is written to the checksum field during the format operation;

means for determining whether a checksum computed from the retrieved block is different than the value in the checksum field of the retrieved block;

means for determining whether the retrieved block includes the pattern; and

means for generating an error if the retrieved block does not include the pattern and if the computed checksum is different than the value in the checksum field.

19. (Canceled)

20. (Currently Amended) The computer system of claim 18, further comprising:

means for writing data and a calculated checksum to one block after the pattern is written to the blocks during initialization.

21. (Currently Amended) The computer system of claim 18, further comprising processing the block retrieved from the storage device with a target driver, a device driver specific to the storage device, and an adapter card specific to the storage device.

22. (Currently Amended) The computer system of claim 21, wherein the means for retrieving the block further performs:

receiving at the target driver a first request for data from an application; generating a second request corresponding to the first request by the target driver;

sending the second request from the target driver to the device driver;

generating a third request corresponding to the second request at the device driver

wherein the third request is formatted to be compatible with the hardware of the storage device;

and

transmitting the third request from the device driver to the storage device via the adapter card.

23–24 (Canceled)

25. (Currently Amended) A ~~article of manufacture~~ A computer readable storage medium containing executable computer program instructions which when executed by a digital processing system cause the system to perform ~~including code for error detection in digital storage data, wherein the digital storage data is contained in a storage device in the digital processing system, wherein the digital storage data comprises a plurality of blocks, and wherein the code~~ executable computer program instructions causes cause the system to perform operations ~~to be performed, the operations comprising:~~

retrieving one block from the plurality of blocks, wherein the retrieved block has a pattern and a checksum field, and wherein the pattern is written into the plurality of blocks during a format operation on the storage device, wherein no checksum value is written to the checksum field during the format operation;

determining whether a checksum computed from the retrieved block is different I than the value in the checksum field of the retrieved block;

determining whether the retrieved block includes the pattern; and

generating an error if the retrieved block does not include the pattern and if the computed checksum is different than the value in the checksum field.

26. (Canceled)

27. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 25, wherein the block is retrieved in response to a read request from an application.

28. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 25, further including data that cause the system to perform operations, comprising [[:]] writing data and a calculated checksum to one block after the pattern was written to the blocks during initialization.

29. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 28, wherein the checksum is calculated by[[:]] computing the checksum from data received in a write request from an application.

30. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 25, wherein the checksum is computed with an Exclusive-Or operation.

31. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 25, wherein the pattern and checksum field are at identical locations in each of the plurality of blocks.

32. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 25, wherein the block retrieved from the storage device is processed by a target driver, a device driver specific to the storage device, and an adapter card specific to the storage device.

33. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 32, wherein the block is retrieved by:

receiving at the target driver a first request for data from an application;

generating a second request corresponding to the first request by the target driver;

sending the second request from the target driver to the device driver;

generating a third request corresponding to the second request at the device driver

wherein the third request is formatted to be compatible with the hardware of the storage device and:

transmitting the third request from the device driver to the storage device via the adapter card.

34. (Currently Amended) The ~~article of manufacture~~ computer readable storage medium of claim 33, wherein the first request is for data having a first byte length and wherein the second request is for data having a second byte length longer than the first byte length.

35–41 (Canceled)

42. (Currently Amended) A computer-implemented method for error detection in digital storage data in a computer system, comprising:

writing a pattern into a plurality of blocks during initialization of the blocks in a storage device, wherein each of the plurality of blocks has the pattern and a checksum field;

computing a checksum from data received in a write request from an application and writing the data and the calculated checksum to a first block of the plurality of blocks;

retrieving the first block from the plurality of blocks;

determining whether the checksum computed from the retrieved first block is different than the value in the checksum field of the retrieved first block and whether the retrieved first block includes the pattern; and

generating an error if the retrieved block does not include the pattern and if the computed checksum is different than the value in the checksum field.

43. (Currently Amended) The computer-implemented method of claim 42, wherein the writing the pattern into the plurality of blocks occurs during a format operation on the storage device, wherein no checksum value is written to the checksum field during the format operation.

44. (Currently Amended) The computer-implemented method of claim 42, wherein the first block is retrieved in response to a read request from an application.

45. (Currently Amended) The computer-implemented method of claim 42, wherein the first block retrieved from the storage device is processed by a target driver, a device driver specific to the storage device, and an adapter card specific to the storage device.

46. (Currently Amended) The computer-implemented method of claim 45, wherein the first block is retrieved by[[:]]

receiving at the target driver a first request for data from an application;

generating a second request corresponding to the first request by the target driver;

sending the second request from the target driver to the device driver;

generating a third request corresponding to the second request at the device driver,

wherein the third request is formatted to be compatible with the hardware of the storage device;

and

transmitting the third request from the device driver to the storage device via the adapter card.

47. (Currently Amended) The computer-implemented method of claim 46, wherein the first request is for data having a first byte length and wherein the second request is for data having a second byte length longer than the first byte length.

48. (Currently Amended) A computer system for error detection in digital storage data, comprising:

means for writing a pattern into a plurality of blocks during initialization of the blocks in a storage device, wherein the plurality of blocks has a pattern and a checksum field;

means for computing a checksum from data received in a write request from an application and writing the data and the calculated checksum to a first block of the plurality of blocks;

means for retrieving the first block from the plurality of blocks;

means for determining whether the checksum computed from the retrieved first block is different than the value in the checksum field of the retrieved first block and whether the retrieved first block includes the pattern; and

means for generating an error if the retrieved first block does not include the pattern and if the computed checksum is different than the value in the checksum field.

49. (Currently Amended) The computer system of claim 48, including means for writing the pattern into the plurality of blocks during a format operation on the storage device, wherein no checksum value is written to the checksum field during the format operation.

50. (Currently Amended) A computer-implemented method, comprising:

retrieving a first block from a plurality of blocks via a target driver, a device driver specific to a storage device, and an adapter card specific to the storage device, wherein the first block includes a checksum field and a pattern previously written into the plurality of blocks;

determining whether a checksum computed from the retrieved first block is different than the value in the checksum field of the retrieved first block;

determining whether the retrieved first block includes the pattern; and

generating an error if the retrieved first block does not include the pattern and if the computed checksum is different than the value in the checksum field.

51. (Currently Amended) The computer-implemented method of claim 50, wherein retrieving the first block further comprises:

receiving at the target driver a first request for data from an application;

generating a second request corresponding to the first request by the target driver;

sending the second request from the target driver to the device driver;

generating a third request corresponding to the second request at the device driver,
wherein the third request is formatted to be compatible with the hardware of the storage device;
and
transmitting the third request from the device driver to the storage device via the adapter
card.

52. (Currently Amended) The computer-implemented method of claim 51, wherein the first request is for data having a first byte length and wherein the second request is for data having a second byte length longer than the first byte length.

53. (Currently Amended) The computer-implemented method of claim 50, wherein prior to retrieving the first block, writing the pattern into the plurality of blocks during a format operation on the storage device, wherein no checksum value is written to the checksum field during the format operation.

54. (Currently Amended) The computer-implemented method of claim 50, wherein prior to retrieving the first block, writing a pattern into a plurality of blocks during initialization of the blocks in a storage device.

55. (Currently Amended) The computer-implemented method of claim 50, further comprising:

writing data and a calculated checksum to the first block after the pattern was written to the plurality of blocks during initialization.

56. (Currently Amended) The computer-implemented method of claim 55, wherein the checksum is calculated by:

computing the checksum from data received in a write request from an application.

57. (Currently Amended) The computer-implemented method of claim 50, wherein the pattern and checksum field are at identical locations in each of the plurality of blocks.